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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/692,433   | 10/23/2003  | Chiu Jui Ta          | DEE-PT135           | 8411             |
| 3624   | 7590        | 01/21/2005           | EXAMINER            |                  |
| VOLPE AND KOENIG, P.C.<br>UNITED PLAZA, SUITE 1600<br>30 SOUTH 17TH STREET<br>PHILADELPHIA, PA 19103 |             |                      | NGUYEN, HIEP        |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2816                |                  |

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                  |  |
|------------------------------|--------------------------------------|----------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/692,433 | <b>Applicant(s)</b><br>TA ET AL. |  |
|                              | <b>Examiner</b><br>Hiep Nguyen       | <b>Art Unit</b><br>2816          |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 November 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Lorenz (US Pat. 6,348,679).

Regarding claim 1, figure 2-4 and 7 of Lorenz shows a differential comparator comprising: a first differential comparator (300), a detecting circuit (500, 600) coupled to a second differential comparator (400), the second differential comparator (400) receives the trigger signal (BIAS) from the detecting circuit. When the input lower than the lower limit (5 V) of the first range portion, the first differential comparator (300) is shut down and the second differential (400) is activated. When the input signal is within the first range, the first differential comparator (300) is activated and the second differential comparator (400) is shut down (abstract, col. 2 lines 19-45; col. 5, lines 9-22).

Regarding claim 2, the recitation “ Universal Serial Bus” is merely intended uses thus; it does not further limit the limitations of the claim. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Therefore, these limitations have not been given patentable weight.

Regarding claims 3 and 4, the first and second differential receiving circuits (300) and (400) receive the input voltage within the first range portion (5V). The “shared loads” comprise elements connected to the amplifying transistors (MP31) and (MP32) of the first differential receiving circuit in figure 3 and the amplifying transistors (MP46) and (MP47) of the second differential receiving circuit in figure 4.

Regarding claims 5-7, the output circuit is circuit (210, 211). It is inherent that

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the second differential comparator (400) is shut down to avoid a floating when the first differential comparator (300) is operated.

Regarding claims 8-11, figures 2-4 and 7 of Lorenz shows a differential comparator comprising:

a first differential receiving circuit (300), a detecting circuit (500, 600) generating a trigger signal (BIAS), a second differential receiving circuit (400), each of the first and second receiving circuit works with different input voltage ranges. The functioning of the differential comparator is fully described above, in the abstract, col. 2 lines 19-45 and col. 5, lines 9-22. The "shared loads" comprise elements connected to the amplifying transistors (MP31) and (MP32) of the first differential receiving circuit in figure 3 and the amplifying transistors (MP46) and (MP47) of the second differential receiving circuit in figure 4. The output circuit is circuit (210, 211). The first differential receiving circuit (300) is shut down when said second differential receiving circuit is activated and the "shared active load" are operated.

Regarding claim 12, figures 2-4 and 7 of Lorenz show a differential comparator circuit for receiving an input voltage within a pre-determined range, amplifying said input voltage into an output voltage, and outputting said output voltage, wherein said range comprises a first range portion (5V) and a second range portion (0-4V), and said input voltage ranged in said first portion is higher than that ranged in said second range portion, comprising:

a first differential (300) receiving circuit for receiving said input voltage ranged in said first range portion;

a detecting circuit (500, 600) electrically connected to said first differential receiving circuit for producing a trigger signal (BIAS) when said detecting circuit detects that said first differential receiving circuit is shut down due to the fact that said input voltage is lower than a lower-limit of said first range portion; and

a second differential (400) receiving circuit electrically connected to said detecting circuit for receiving said input voltage ranged in said second range portion in response to said trigger signal.

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***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hiep Nguyen whose telephone number is (571) 272-1752. The examiner can normally be reached on Monday to Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hiep Nguyen

01-12-04



TUAN T. LAM  
PRIMARY EXAMINER